# 2012 Komfy™ Service Manual

GEN.0000000003544 Rev B

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# SRAM LLC Warranty

**Extent of Limited Warranty**
SRAM warrants its products to be free from defects in materials or workmanship for a period of two years after original purchase. This warranty only applies to the original owner and is not transferable. Claims under this warranty must be made through the retailer where the bicycle or the SRAM component was purchased. Original proof of purchase is required.

**Local law**
This warranty statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state (USA), from province to province (Canada), and from country to country elsewhere in the world.

To the extent that this warranty statement is inconsistent with the local law, this warranty shall be deemed modified to be consistent with such law, under such local law, certain disclaimers and limitations of this warranty statement may apply to the customer. For example, some states in the United States of America, as well as some governments outside of the United States (including provinces in Canada) may:

a. Preclude the disclaimers and limitations of this warranty statement from limiting the statutory rights of the consumer (e.g. United Kingdom).

b. Otherwise restrict the ability of a manufacturer to enforce such disclaimers or limitations.

**Limitations of Liability**
To the extent allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event shall SRAM or its third party supplies be liable for direct, indirect, special, incidental, or consequential damages.

**Limitations of Warranty**
This warranty does not apply to products that have been incorrectly installed and/or adjusted according to the respective SRAM technical installation manual. The SRAM installation manuals can be found online at sram.com, rockshox.com, avidbike.com, truvativ.com, zipp.com, or quarq.com.

This warranty does not apply to damage to the product caused by a crash, impact, abuse of the product, non-compliance with manufacturers specifications of usage or any other circumstances in which the product has been subjected to forces or loads beyond its design.

This warranty does not apply when the product has been modified.

This warranty does not apply when the serial number or production code has been deliberately altered, defaced or removed.

This warranty does not apply to normal wear and tear. Wear and tear parts are subject to damage as a result of normal use, failure to service according to SRAM recommendations and/or riding or installation in conditions or applications other than recommended.

**Wear and tear parts are identified as:**

- Dust seals
- Bushings
- Air sealing o-rings
- Glide rings
- Rubber moving parts
- Foam rings
- Rear shock mounting hardware and main seals
- Upper tubes (stanchions)
- Stripped threads/bolts (aluminium, titanium, magnesium or steel)
- Brake sleeves
- Brake pads
- Chains
- Sprockets
- Cassettes
- Shifter and brake cables (inner and outer)
- Handlebar grips
- Shifter grips
- Jockey wheels
- Disc brake rotors
- Wheel braking surfaces
- Bottomout pads
- Bearings
- Bearing races
- Pawls
- Transmission gears
- Spokes
- Free hubs
- Aero bar pads
- Corrosion
- Tools
- Batteries

This warranty shall not cover damages caused by the use of parts of different manufacturers.

This warranty shall not cover damages caused by the use of parts that are not compatible, suitable and/or authorised by SRAM for use with SRAM components.

This warranty shall not cover damages resulting from commercial (rental) use.

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# SAFETY FIRST!

We care about YOU. Please, always wear your safety glasses and protective gloves when servicing RockShox products.

Protect yourself! Wear your safety gear!

## SRAM BRAKE SERVICE

We recommend that you have your SRAM brakes serviced by a qualified bicycle mechanic. Servicing SRAM brakes requires knowledge of brake components as well as the special tools and fluids used for service.

For exploded diagram and part number information, please refer to the Spare Parts Catalog available on our web site at sram.com.

For order information, please contact your local SRAM distributor or dealer.

Information contained in this publication is subject to change at any time without prior notice. For the latest technical information, please visit our website at sram.com.

Your product's appearance may differ from the pictures/diagrams contained in this publication.

## KOMFY BRAKE LEVER OVERHAUL

SRAM brake lever assemblies need to be serviced periodically to optimize braking function. If brake fluid is leaking from any area of the brake lever assembly, there may be damage or wear and tear to the internal moving parts. If your brake was filled with fluid OTHER than DOT 5.1 or 4 (such as mineral oil or DOT 5), damage to all rubber and plastic internal parts may exist. If your brake was damaged in a crash, there may be damage to the lever blade and pushrod assemblies, as well as the housing assembly. Inspection and/or replacement of these parts, due to any of the above situations, will be necessary to restore proper brake function.

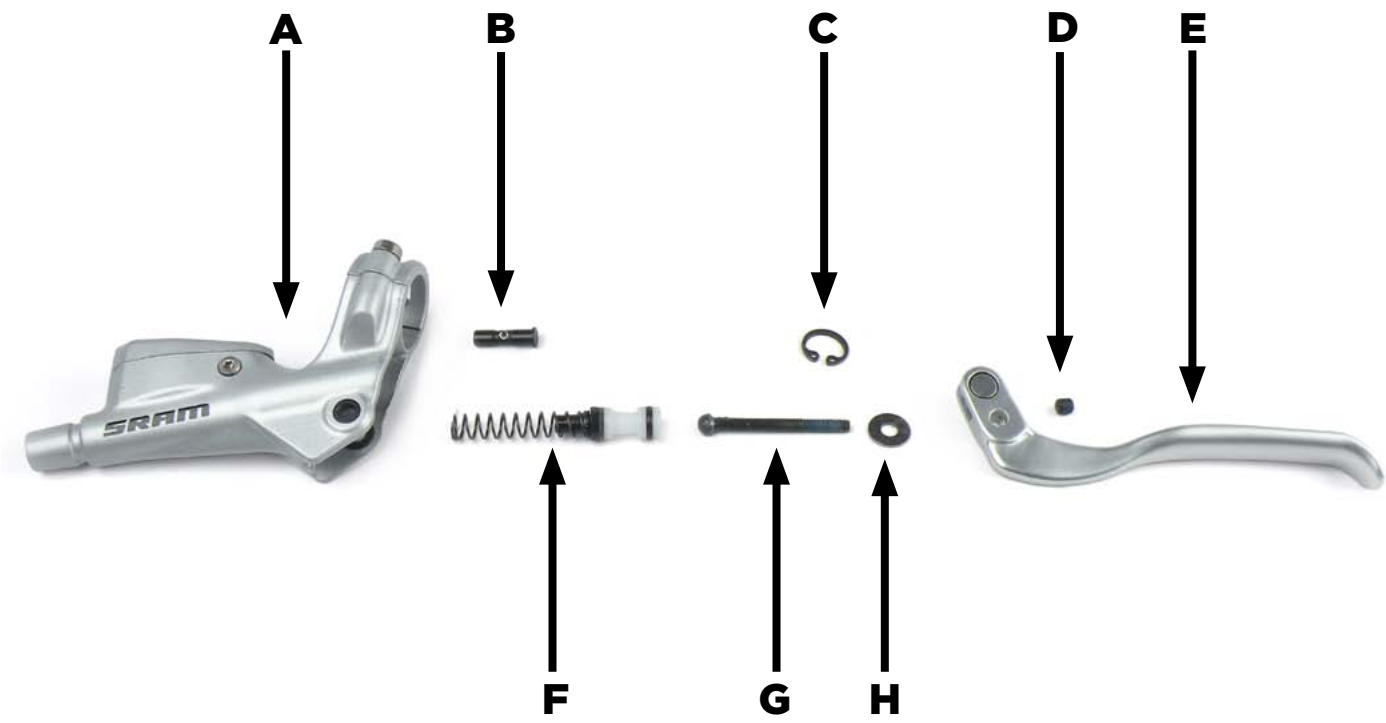
### ⚠ CAUTION

- SRAM highly recommends the use of nitrile gloves when handling DOT fluids.
- DOT fluids will damage painted surfaces! If any fluid comes in contact with a painted surface (i.e. your frame) or printing on the brakes, wipe it off immediately and clean with isopropyl alcohol or water. Removal of paint and/or printing by DOT fluid is not covered under warranty!
- Do not allow any brake fluid to come in contact with the brake pads. If this occurs, the pads are contaminated and must be replaced.
- For best results, use only Avid High-Performance 5.1 DOT Fluid. If Avid fluid is not available, only use DOT 5.1 or 4 fluid. Do **not** use mineral oil or DOT 5 fluid.
- Used DOT fluid should be recycled or disposed of in accordance to local and federal regulations.
- Never pour DOT fluid down a sewage or drainage system or into the ground or a body of water.

### PARTS AND TOOLS NEEDED FOR SERVICE:

- Safety glasses
- Nitrile gloves
- T10 TORX®
- Needle-nose pliers
- Long snap ring pliers
- Phillips head screwdriver
- Flat blade screwdriver
- Oil pan
- Avid High-Performance 5.1 DOT Fluid or DOT 4 Fluid, or Avid DOT Grease or DOT 5.1 or 4 compatible grease
- Torque wrench
- 4 mm hex bit socket
- 8 mm flare nut crowfoot
- 8 mm flare nut wrench
- 2, 2.5, and 4 mm hex wrenches
- Sharp pick
- Bench vise or 10 mm open end wrench
- Isopropyl alcohol
- Clean, lint-free rag

# EXPLODED VIEW - KOMFY BRAKE LEVER ASSEMBLY




A. LEVER BODY

B. PIVOT PIN

C. SNAP RING

D. PIVOT SET SCREW

E. LEVER BLADE

F. PISTON/SPRING ASSEMBLY

G. REACH ADJUST PUSHROD

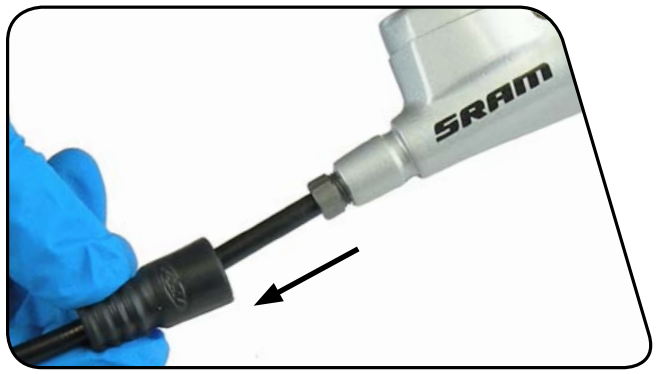
H. WASHER

**1** Remove the brake lever from the handlebar.

Use a 4 mm hex to remove the brake clamp bolts from the clamp.

Pull the hose boot off the compression nut and slide it down the hose.

If dirty, clean the levers with alcohol and a clean rag.




**2** Use an 8 mm flare nut wrench to unthread the hose compression nut. Pull the brake hose and compression fitting from the brake lever body.

**3** Allow any brake fluid to drain into a container. Hold the lever assembly over the container and squeeze the lever to pump any brake fluid from inside the lever assembly.

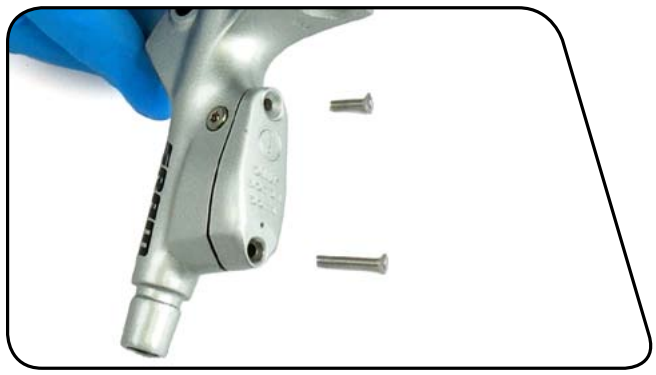
**If the system has been contaminated with the wrong fluid, you will need to flush all the parts with soapy water, rinse, and allow to dry prior to rebuilding. You will also need to install all new seals and a new hose.**

**4** Use a small Phillips head screwdriver to remove both reservoir cover screws.

**5** Remove the reservoir cover cap and bladder from the lever body. Hold the lever over a container to catch any fluid that spills out.

**6** Insert a new bladder into the underside of the reservoir cover. Line up the hole in the bladder with the hole located on the thicker end of the cover.

**7** Place the reservoir cover and bladder back onto the lever body. Install the cover cap screws, short screw closest to lever clamp, and use a Phillips screwdriver to tighten both screws to 1.1-1.3 N•m (10-11 in-lb).

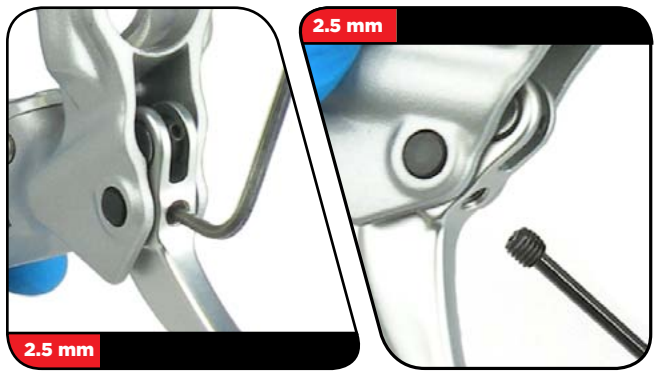


**8** Use a T10 TORX® to remove both bleed screws.

**9** Use a sharp pick to remove and replace the o-ring on each bleed screw.

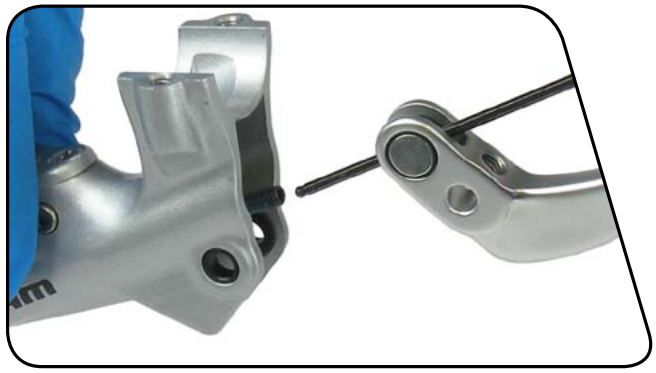
**10** Use a T10 TORX® to reinstall the bleed screws into the lever body and tighten to 1.1-1.3 N·m (10-11 in-lb).

**11** Use a 2.5 mm hex to turn the pivot set screw counter-clockwise and remove it from the lever.

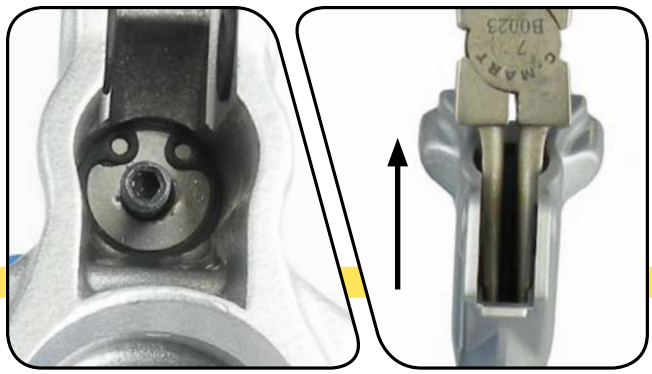



**12** Use a 2.5 mm hex to push against the smaller side of the pivot pin and remove it from the lever body.

**13** Use a 2 mm hex to turn the reach adjust pushrod **clockwise** and unthread it from the lever blade. Remove the lever blade from the lever body.



**14** Use long snap ring pliers to compress the snap ring and remove it from the lever body. Then remove pushrod and washer from the lever body by hand.



**CAUTION - INJURY HAZARD**

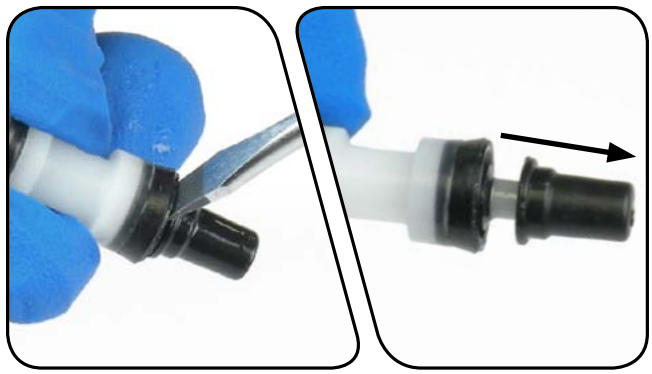
Eye Hazard: Do not look directly into the lever body while performing this step. The internal piston/ spring assembly is preloaded and will come out of the lever body quickly. Wear safety glasses.

**15** Use needle-nose pliers to remove the piston/spring assembly from the lever body.

**16** Remove the piston from the spring.

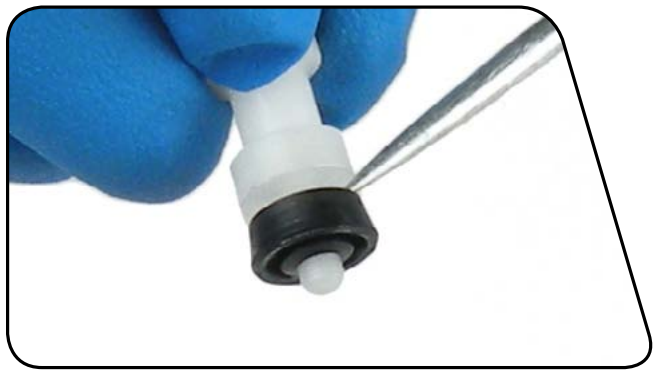
**17** Use a small flat blade screwdriver to remove the spring coupling from the piston. Set the coupling aside.

*Do not scratch any plastic parts (piston or o-ring). Scratched parts will need to be replaced.*

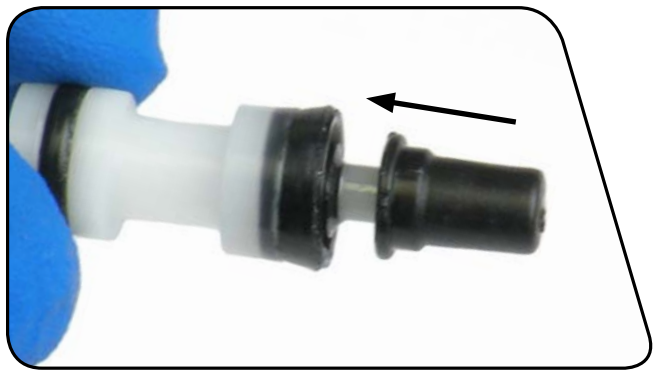


**18** Use a sharp pick to remove the cup seal (lower large black seal) from the piston. Slide the flat side of the new cup seal onto the piston with the open end facing out. Ensure it sits flush against the piston.

*Do not scratch the piston.* ***Scratched parts will need to be replaced.***

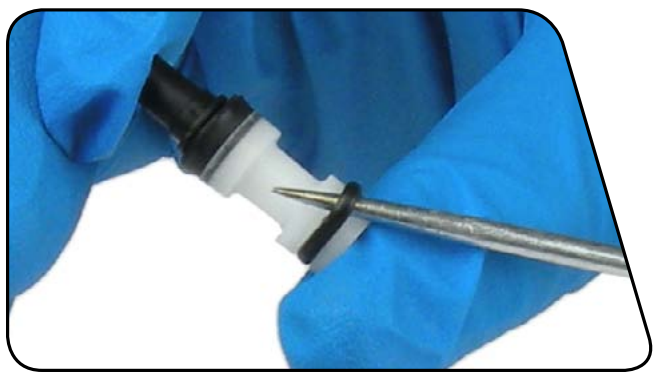


**19** Reinstall the spring coupling onto the piston so that it snaps into the open end of the cup seal.



**20** Remove and replace the o-ring on the piston.

*Do not scratch the piston or the new o-ring.*
***Scratched parts will need to be replaced.***



**21** Reinstall the spring onto the piston assembly.

**22** Lubricate the entire piston assembly by dipping it into Avid High-Performance 5.1 DOT Fluid. Insert the piston assembly, spring side first, into lever body.

*You can also use Avid DOT Grease, or DOT 5.1 or 4 compatible grease, as a lubricant.*

**23** Place the washer onto the pushrod. Insert the pushrod and washer into lever body so that the pushrod sits on top of the piston.

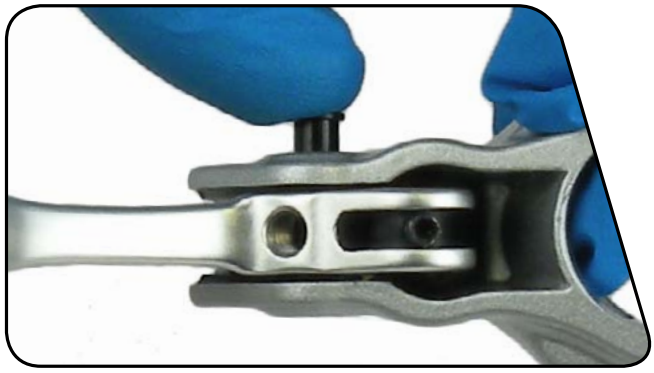
**24** Use long snap ring pliers to insert the snap ring over the washer and push the piston assembly into the lever body. Secure the snap ring in the groove of the lever body.

**25** Insert a 2 mm hex through the hole in the cross dowel of the lever blade and into the pushrod.

Turn the hex **counter-clockwise** to thread the pushrod into the cross dowel. Use your thumb to hold the lever blade against the lever body.

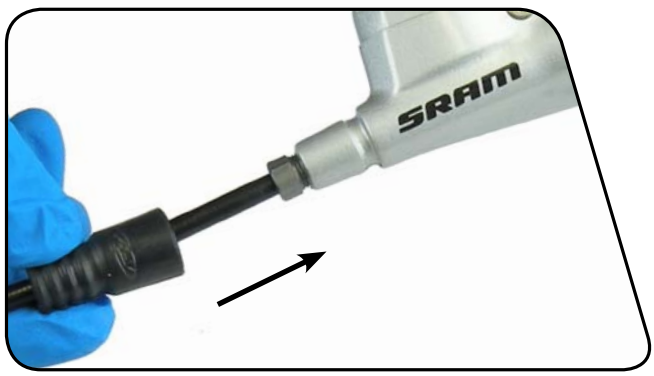
Leave 3 threads of the pushrod exposed from the cross dowel.

**26** Make sure the pivot bushings are installed in the lever body. Line up the holes in the lever blade, lever body, and both bushings. Insert the pivot pin into the aligned holes. Use your thumb to press down on the pivot pin until it sits flush with the lever body.



**27** Use a 2.5 mm hex to reinstall the pivot set screw into the lever blade and tighten until snug.

**28** Thread the compression nut into the lever body by hand. Use a torque wrench with an 8 mm flare nut crowfoot to tighten the compression nut to 4.9-5.4 N·m (43-48 in-lb). Slide the hose boot over the compression nut.



**29** Reinstall the brake lever onto the handlebar. Arrows on the clamp must point up. Use a torque wrench with a 4 mm hex bit socket to reinstall the brake clamp bolt and tighten the top bolt completely to 2.8-3.4 N·m (25-30 in-lb) so there is no gap. Then tighten the bottom bolt to the same torque.

## KOMFY BRAKE CALIPER OVERHAUL

SRAM brake lever assemblies need to be serviced periodically in order to optimize braking function. If brake fluid is leaking from any area of the brake lever assembly, there may be damage or wear and tear to the internal moving parts. If your brake was filled with fluid OTHER than DOT 5.1 or 4 (such as mineral oil or DOT 5), damage to all rubber and plastic internal parts may exist. If your brake was damaged in a crash, there may be damage to the lever blade and pushrod assemblies, as well as the housing assembly. Inspection and/or replacement of these parts, due to any of the above situations, will be necessary to restore proper brake function.

### CAUTION

- SRAM highly recommends the use of rubber gloves when handling DOT fluids.
- DOT fluids will damage painted surfaces! If any fluid comes in contact with a painted surface (i.e. your frame) or printing on the brakes, wipe it off immediately and clean with isopropyl alcohol or water. Removal of paint and/or printing by DOT fluid is not covered under warranty!
- Do not allow any brake fluid to come in contact with the brake pads. If this occurs, the pads are contaminated and must be replaced.
- For best results, use only Avid High-Performance 5.1 DOT Fluid. If Avid fluid is not available, only use DOT 5.1 or 4 fluid. Do **not** use mineral oil or DOT 5 fluid.
- Used DOT fluid should be recycled or disposed of in accordance to local and federal regulations.
- Never pour DOT fluid down a sewage or drainage system or into the ground or a body of water.

## PARTS AND TOOLS NEEDED FOR SERVICE:

- Safety glasses
- Nitrile gloves
- T10 TORX®
- Avid High-Performance 5.1 DOT Fluid or DOT 4 Fluid, or Avid DOT Grease or DOT 5.1 or 4 compatible grease
- Oil pan
- Air compressor with blow gun chuck
- Piece of inner tube
- 8 mm open end wrench
- Torque wrench
- 8 mm flare nut crowfoot
- 5 mm hex bit socket
- 5 mm hex
- Sharp pick
- Clean, lint-free rags
- Isopropyl alcohol

## TROUBLESHOOTING

**'Sticky' or slow brake pad return**

Before completely disassembling your caliper, it's worth trying to loosen the sticky piston. Try the following:

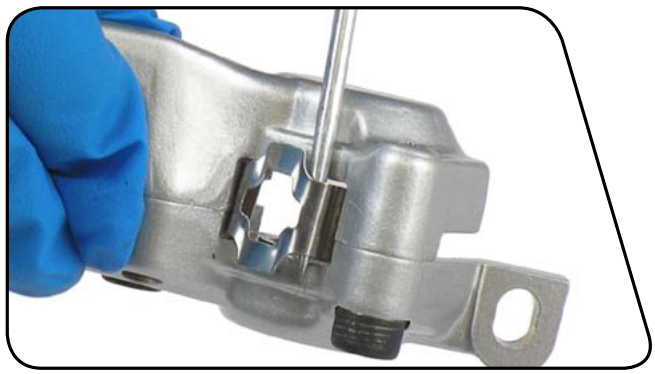
1. Clamp the bicycle in a bicycle work stand.
2. Spin the affected wheel. Lightly squeeze the brake lever and watch the brake pads when the lever is released.
3. Determine which side of the caliper has a slow returning brake piston.
4. Remove the caliper from the bicycle. If you have a caliper mounting bracket, remove the bracket with the caliper attached.
5. Pull and remove both brake pads and H-spring.
6. Use a 10 mm box wrench to press the working piston into caliper body.
7. While continuing to hold the piston inside the caliper body, squeeze the brake lever slowly to move the sticky piston inward. Press the piston back into the caliper again.
8. Repeat these steps to correct caliper piston inner o-ring position.
9. Both pistons should now be moving freely. Reinstall the spring pad clip, H-spring, and pads into the caliper. If there is no improvement, continue with caliper service.
10. Reinstall the caliper (or mounting bracket with attached caliper) on the bicycle. You may need to re-center the caliper to the rotor. If you removed the caliper without an adapter, or removed it from the adapter, it will need to be re-centered. Spin the wheel and check brake function.

**1** Remove the brake caliper from the fork or frame and remove the caliper mounting bracket and hardware from the caliper. Set aside in the correct order (not pictured).

**2** Pull and remove both brake pads and H-spring.

*If the total thickness of the backing plate and pad friction material is less than 3 mm, the brake pads need to be replaced.*

**3** Use a sharp pick to remove the pad clip from the outside of the caliper.



**4** Use an 8 mm open end wrench to remove the compression nut. Pull the brake hose and compression nut from the caliper body.

*Brake fluid will leak, so hold the caliper over a container to catch the fluid.*

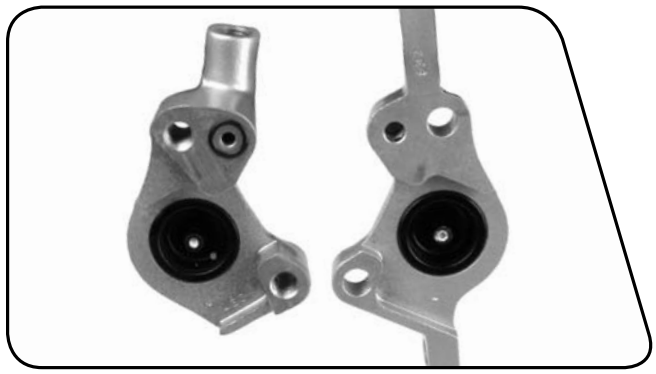
**5** Use a T10 TORX® to remove the bleed port screw.

**6** Use a sharp pick to remove and replace the o-ring on the bleed screw.

**7** Use a T10 TORX to reinstall the bleed port screw and tighten to 1.1-1.3 N·m (10-11 in-lb).

**8** Use a 5 mm hex to remove the two caliper body bolts.

**9** Separate the caliper body halves and open the caliper assembly.



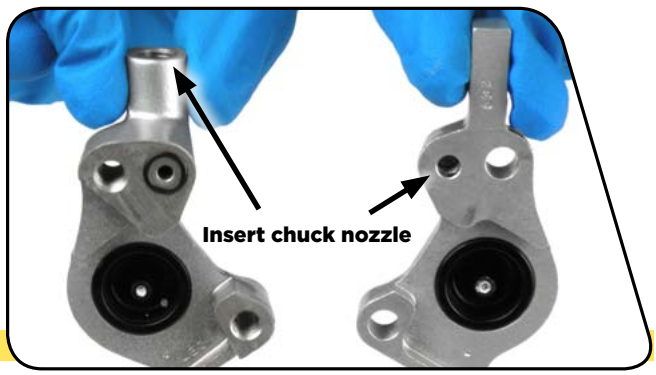
**10** **Caliper Piston Removal:**

Insert an air compressor chuck nozzle into the hole of one of the caliper body halves.

**Cover the pistons with at least two rags**. Point the caliper pistons and rags into your hand.

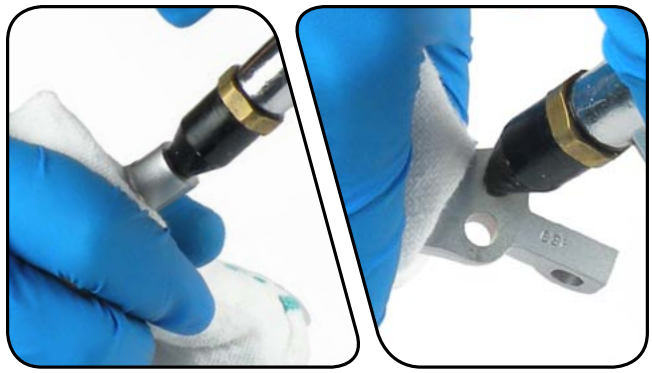
**Inboard caliper half only -** Use a piece of inner tube over the hole with the o-ring to create an airtight seal.

Squeeze the air chuck and force air into the hole in the caliper half. The compressed air will unseat the pistons from the caliper. Remove the pistons from the caliper.



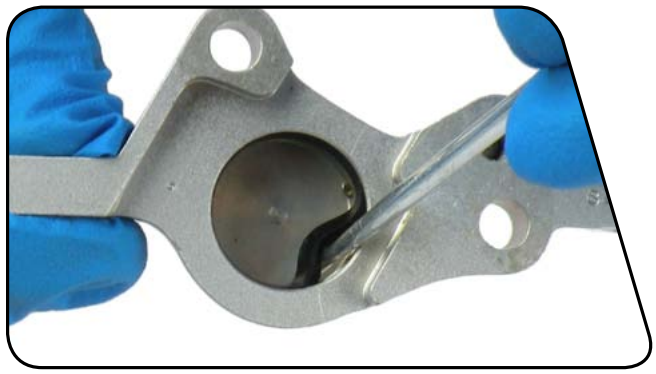

**⚠ CAUTION - IMPACT HAZARD**

The piston can exit the caliper at a high rate of speed. Point the caliper in a safe direction. Hold two rags over the piston to prevent the piston from causing injury or becoming lost. Repeat this process for the other caliper body half.



**11** Remove the square-edge o-rings from inside each caliper body half with a sharp pick. Lubricate the new square-edge o-rings with Avid High-Performance 5.1 DOT Fluid install them inside each caliper body half.

*Do not scratch the o-ring gland with the pick. You can also use Avid DOT Grease, or DOT 5.1 or 4 compatible grease, as a lubricant.*



**12** Inspect the caliper pistons for damage and replace them if necessary. Reinstall the caliper brake pistons into each half of the caliper body.

**13** Use a sharp pick to remove and replace the o-ring located on the inside of the inboard caliper half.

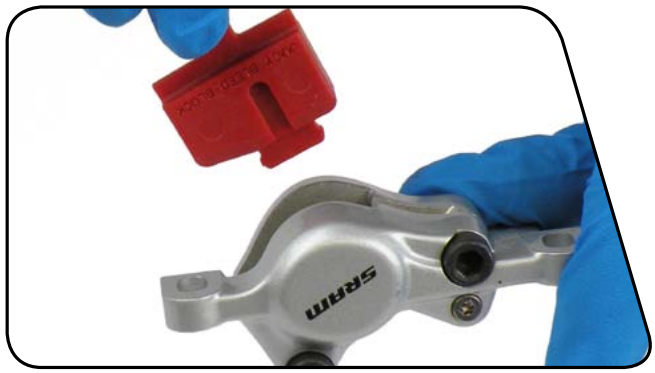
*Make sure the o-ring is seated in the recessed gland. Do not scratch the o-ring gland with the pick.*

**14** Re-assemble the caliper body halves and reinstall the caliper body bolts. Use a torque wrench with a 5 mm hex bit socket to tighten the bolts to 8.5-10 N·m (75-90 in-lb).

**15** Reinstall the compression nut and brake hose onto the caliper by hand. Use a torque wrench with an 8 mm flare nut crowfoot to tighten the compression nut to 4.9-5.4 N·m (43-48 in-lb).

**16** Insert the Bleed Block into the caliper in place of the brake pads.

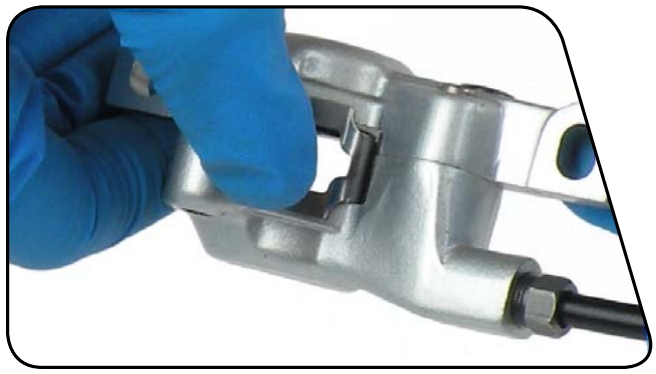
**You will need to bleed your brakes before reinstalling the brake pads. Overhauling the caliper introduces a small amount of air into the system, so at this point it is necessary to bleed the brakes for optimal performance. See the section, "Brake Bleed Procedure" for instructions.**




**17** Clean the assembled caliper with alcohol and a clean rag to remove any brake fluid.

## KOMFY BRAKE PAD INSTALLATION

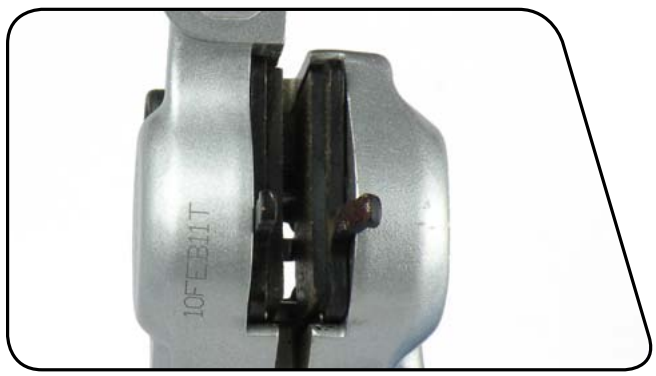
**18** Remove the Bleed Block. Insert the pad clip into the top of the caliper.



**19** Position the H-spring between the two pads. The curved handle of the inner pad should face toward the inboard side of the caliper. Squeeze the pad and spring assembly together.

**20** Reinstall the pads and spring assembly into the bottom of the caliper until it snaps into place, indicating it is properly secured in the caliper body.

*Hold one hand over the pad clip as you insert the pads.*



## BRAKE HOSE LENGTH ADJUSTMENT

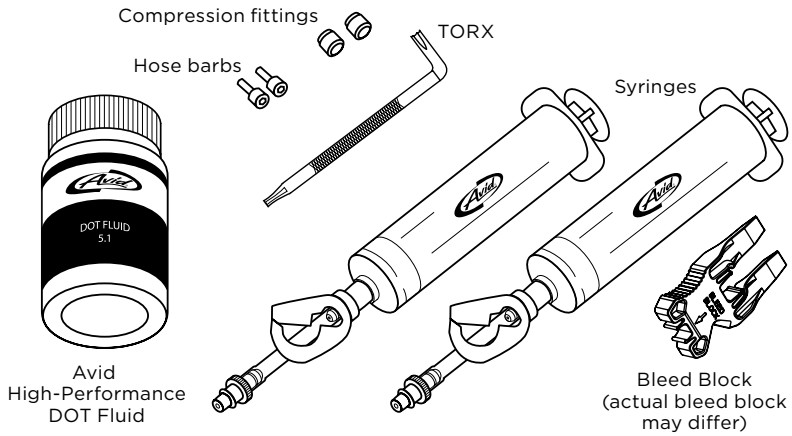
**After completing the hose length adjustment, it will be necessary to bleed the brakes for optimal performance. See the section, "Brake Bleed Procedure" for instructions.**

### CAUTION

- SRAM highly recommends the use of nitrile gloves when handling DOT fluids.
- DOT fluids will damage painted surfaces! If any fluid comes in contact with a painted surface (i.e. your frame) or printing on the brakes, wipe it off immediately and clean with isopropyl alcohol or water. Removal of paint and/or printing by DOT fluid is not covered under warranty!
- Do not allow any brake fluid to come in contact with the brake pads. If this occurs, the pads are contaminated and must be replaced.
- For best results, use only Avid High-Performance 5.1 DOT Fluid. If Avid fluid is not available, only use DOT 5.1 or 4 fluid. Do **not** use mineral oil or DOT 5 fluid.
- Used DOT fluid should be recycled or disposed of in accordance to local and federal regulations.
- Never pour DOT fluid down a sewage or drainage system or into the ground or a body of water.

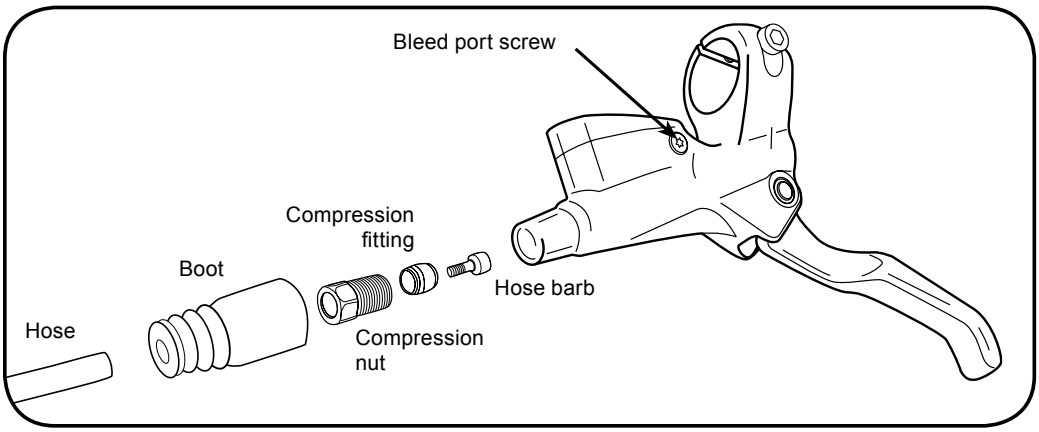
## PARTS AND TOOLS NEEDED FOR SERVICE:

- Safety glasses
- Nitrile gloves
- Hydraulic hose cutters or very sharp cable housing cutters
- Avid DOT Grease or DOT 5.1 or 4 compatible grease
- Isopropyl alcohol
- Avid Bleed Kit or Avid Professional Bleed Kit
- Adjustable torque wrench
- 8 mm flare nut wrench
- 11 mm open end wrench
- T10 TORX®
- Clean, lint-free rag
- Avid High-Performance 5.1 DOT Fluid or DOT 4 Fluid



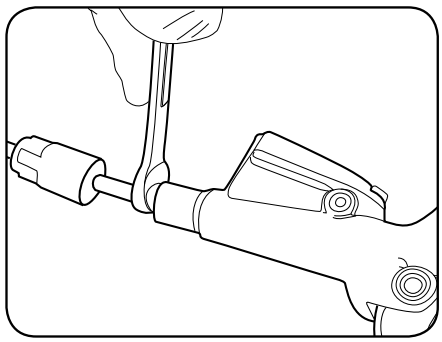

**Avid Bleed Kit Contents**

**LEVER BODY**




**1** Make sure the hoses are properly secured to the bicycle and check the routing of each hose. Account for suspension movement and be sure the handlebars can move freely by turning the bars all the way from side to side.

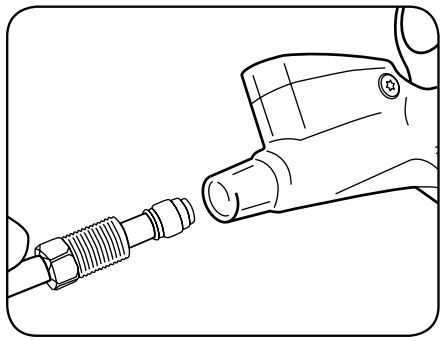
**2** Pull the hose boot away from the lever to access the compression nut. If the boot sticks, carefully pry up a corner with something that won't harm it (like the end of a zip tie) and spray isopropyl alcohol between the boot and the lever. Work the alcohol in; the boot should loosen up and slide easily down the hose. Use an 8 mm flare nut wrench to unthread the compression nut.



**3** Pull the hose from the lever. Be careful, DOT fluid will drip from the hose. Try not to spill too much fluid because any fluid that drips out will create bubbles that you'll have to eliminate later.

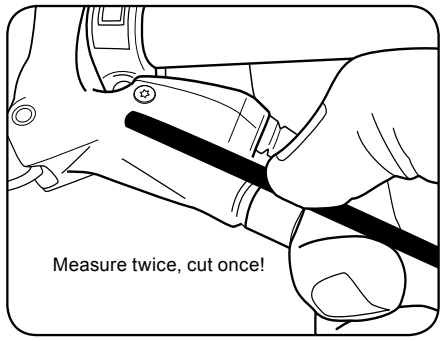
Slide the nut down the hose and away from the end where you'll be cutting.

**Do not pull the brake lever while the hose is removed.**



**4** Determine where you need to cut the hose by holding it up to the lever in the position you like. Make sure to leave a gentle bend in the hose with enough length to freely turn the bars all the way from side to side. Double-check this measurement because you can't go back after you cut.

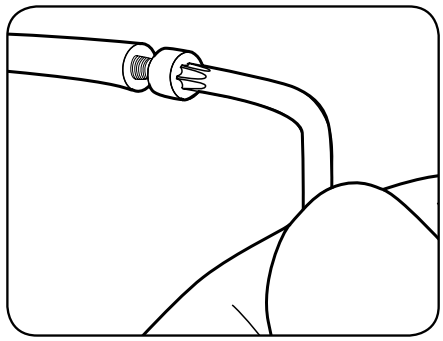
The groove in the lever nose marks the spot where you'll cut the hose. Cut the hose using hydraulic hose cutters or very sharp cable housing cutters.

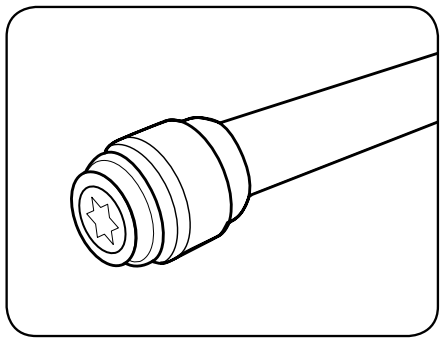



**5** Apply Avid DOT Grease to the threads of a new hose barb, the compression fitting outer surfaces and compression nut threads.

While holding the hose firmly, use a T10 TORX® to thread the hose barb into the end of the hose until it is flush.

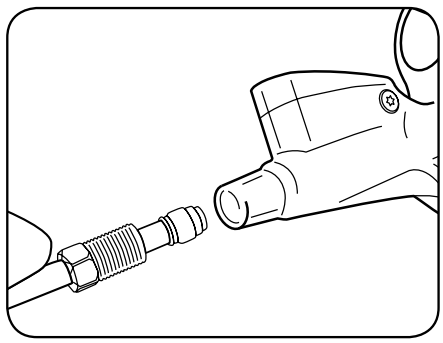
Slide a new compression fitting over the end of the hose with the new hose barb.





**6** Push the hose firmly into the lever until it stops.

While holding the hose in place, slide the compression fitting and compression nut up to the lever or hose stop.

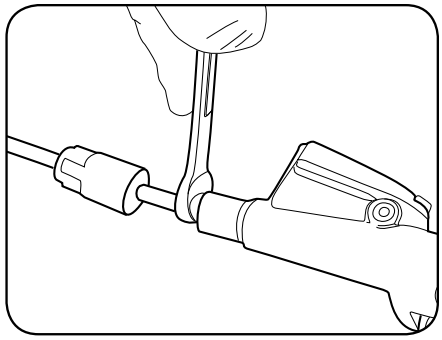


**7** While continuing to push the hose into the lever body, use an 8 mm flare nut wrench to tighten the compression nut to the proper torque.

· If your compression fitting is alloy, tighten to 5 N·m (47 in-lb).

· If your compression fitting is steel, tighten to 7.8 N·m (70 in-lb)

Slide the boot back into place.



**Cutting the hose introduces a small amount of air into the system, so at this point it is necessary to bleed the brakes for optimal performance. See the next section, "Brake Bleed Procedure" for instructions.**

## BRAKE BLEED PROCEDURE

SRAM brakes are the most powerful and precise hydraulic brakes on the market. A key reason behind this is the ability to optimize brake performance with a perfect bleed. The goal of bleeding is to remove any air that is trapped in the hose, caliper, or lever. Air trapped in a hydraulic brake system degrades the performance of the brake. The following instructions will walk you through our simple bleed procedure.

**SRAM brakes come with hoses attached and bled. If you don't need to change the hose length, you do not need to bleed the system prior to installation.**

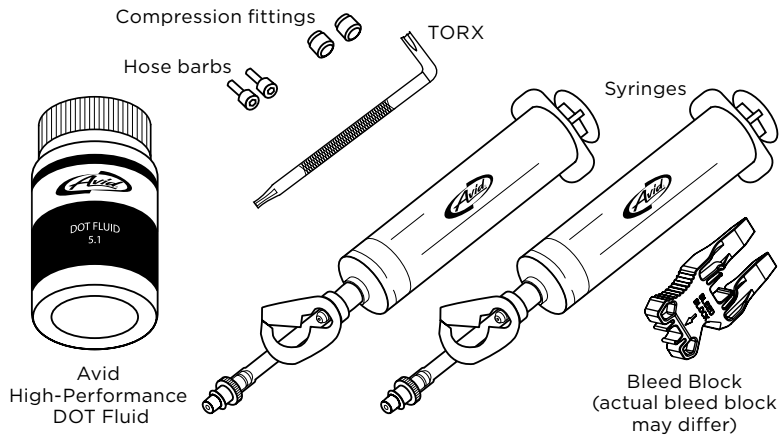
Supplemental video instruction is available at sram.com/en/service.

## CAUTION

- SRAM highly recommends the use of nitrile gloves when handling DOT fluids.
- DOT fluids will damage painted surfaces! If any fluid comes in contact with a painted surface (i.e. your frame) or printing on the brakes, wipe it off immediately and clean with isopropyl alcohol or water. Removal of paint and/or printing by DOT fluid is not covered under warranty!
- Do not allow any brake fluid to come in contact with the brake pads. If this occurs, the pads are contaminated and must be replaced.
- For best results, use only Avid High-Performance 5.1 DOT Fluid. If Avid fluid is not available, only use DOT 5.1 or 4 fluid. Do **not** use mineral oil or DOT 5 fluid.
- Used DOT fluid should be recycled or disposed of in accordance to local and federal regulations.
- Never pour DOT fluid down a sewage or drainage system or into the ground or a body of water.

## PARTS AND TOOLS NEEDED FOR SERVICE:

- Safety glasses
- Nitrile gloves
- T10 TORX®
- Isopropyl alcohol
- Avid Bleed Kit or Avid Professional Bleed Kit
- Bleed Block
- 2.5 and 4 mm hex wrenches
- Sharp pick
- Clean, lint-free rag
- Avid High-Performance 5.1 DOT Fluid or DOT 4 Fluid



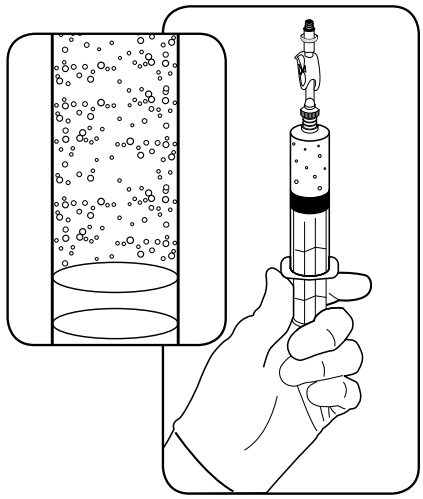

**Avid Bleed Kit Contents**

**When bleeding SRAM brakes, keep in mind that you are simply forcing air bubbles out of the system. We recommend that you bleed your brakes at least once a year to ensure optimal performance. If you ride frequently or in aggressive terrain, you should bleed your brakes more often.**

**When bleeding brakes, you may notice discoloration of the old fluid as it exits the system into the syringe at the lever. If the fluid is severely discolored, this indicates that the fluid is very old. In this case, bleeding the system twice in order to completely remove the old fluid is recommended.**

**1** Fill one syringe 1/2 full with Avid High-Performance 5.1 DOT Fluid and fill the other syringe 1/4 full.

Hold each syringe with the tip pointed up and tap the side of the syringe with your finger to bring any air bubbles to the top. Place a clean rag around the tip and slowly push the air bubbles out of the syringe. Close the hose clamp on each syringe.

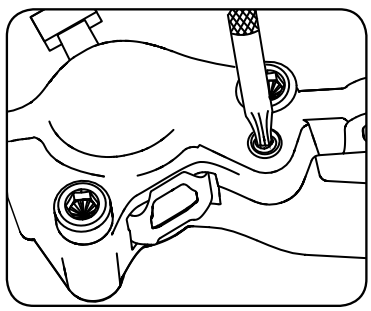


**2** De-gas the fluid in the 1/2 full syringe. Leave the hose clamp shut and pull on the plunger. Bubbles will form in the brake fluid. While the plunger is still pulled down, lightly tap the syringe to release the bubbles sticking to the sides and the bottom so that they can rise to the top of the fluid. When the bubbles stop forming and have all risen to the top, release the plunger, open the clamp and carefully push the air out. Repeat several times.

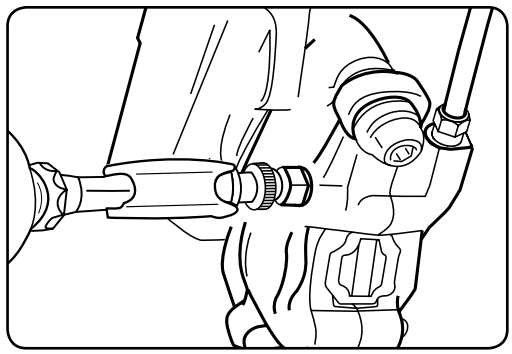
*You will not be able to remove all the bubbles.*

**3** Remove the wheel from your bike. Remove the brake pads and spreader clip from the caliper and insert the appropriate Bleed Block. This will help prevent system overfill and keep DOT fluid from contaminating your brake pads.

**4** Use the T10 TORX® to remove the caliper bleed port screw from the caliper body or banjo bolt

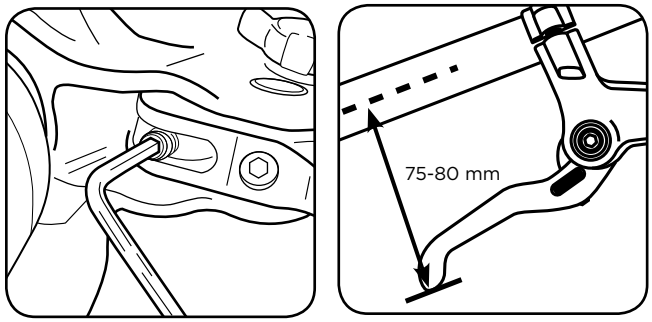


**5** Make sure the fluid in the 1/2 full syringe is pushed all the way to the tip (no air gap!), then thread into the caliper bleed port.

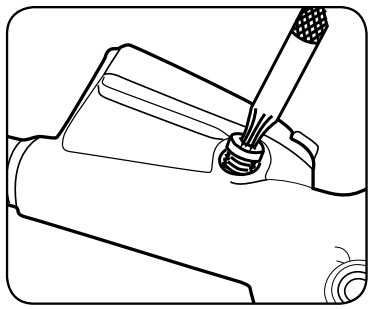


**6** **Reach Adjust**

Make sure the tip of the lever blade is 75-80 mm from the centerline of the handlebar. If the lever is too far out, it can make bleeding the brake impossible.




**7** Use the T10 TORX® to remove the lever bleed port screw located on the top of the lever.



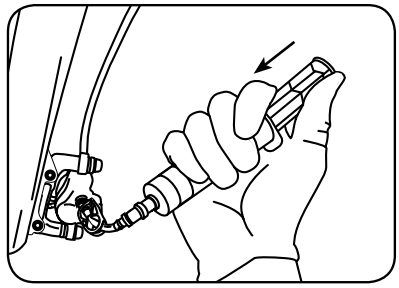
**8** Make sure the fluid in the 1/4 full syringe is pushed all the way to the tip (no air gap!), then thread into the lever bleed port.

*It is not necessary to reposition the angle of the brake lever on the handlebar. You may have a small amount of DOT fluid drip from the bleed port screw, this is normal. Just have a clean rag handy to wipe off any excess after the syringe is installed.*

**9** Hold both syringes upright.

Gently push on the caliper syringe plunger to move fluid from the caliper syringe into the lever syringe until the lever syringe is increased to 1/2 full and the caliper syringe is decreased to 1/4 full.

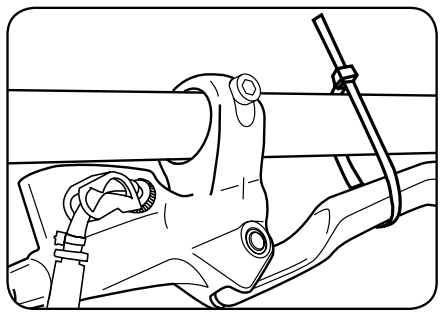
*You should see bubbles form in the lever syringe.*



**10** Close the syringe clamp on the lever.

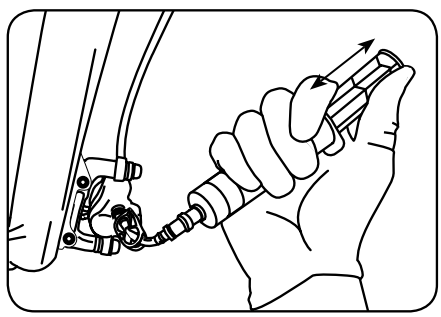
**11** Pull the brake lever all the way to the bar with your finger and hold it there until instructed to release the lever in a later step.

If you don't want to hold the lever with your finger, have a friend hold it or you can fasten it with a zip-tie or rubber band.



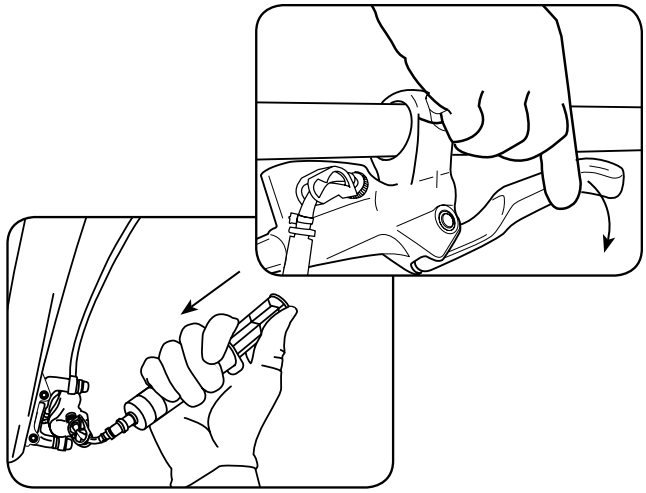
**12** Pull out on the caliper syringe plunger to create a vacuum then gently push in on the plunger to pressurize the system. Repeat this procedure several times, until large bubbles stop coming out of the caliper.

*Do not pull the plunger past the end of the syringe.*



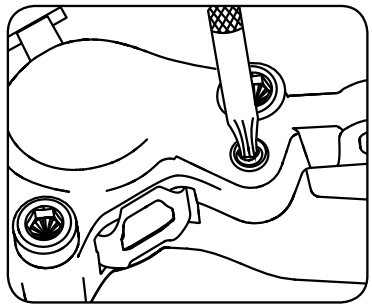
**13** Once the large bubbles at the caliper have stopped, apply a small amount of pressure on the syringe plunger and slowly let the pressure extend the brake lever you have been holding with your finger. If you fastened the lever with a zip-tie or rubber bands, remove these first but keep the lever pulled in with your finger, then apply pressure on the syringe plunger.

*You will feel the pressure at your finger on the lever, just let the fluid extend the lever back to its original position.*



**14** Close the clamp on the caliper syringe, then remove the syringe from the caliper and reinstall the bleed port screw.

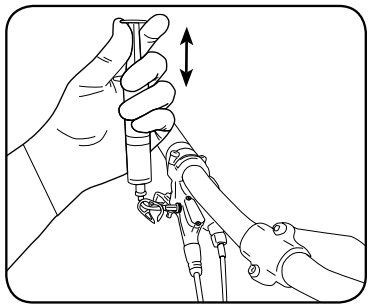
*Use a clean rag to wipe off any excess DOT fluid that spills out as you reinstall the bleed port screw.*



**15** Open the syringe clamp on the lever.

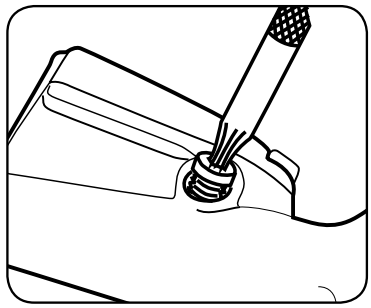
**16** Pull out on the lever syringe plunger to create a vacuum, then gently push in on plunger to pressurize the system. Squeeze and release the brake lever ten times, allowing the lever to snap back to its starting position after squeezing (this helps break loose the bubbles). Repeat this procedure of creating a vacuum at the syringe and squeezing the brake lever ten times until large bubbles stop coming out of the lever.

*Do not pull out too hard on the plunger or you will suck air past the plunger seal into the fluid and create more bubbles that you will have to eliminate.*



**17** Once the large bubbles at the lever have stopped, apply a small amount of pressure on the syringe plunger then remove the syringe and reinstall the bleed port screw.

*There will be a small amount of excess DOT fluid that spills out as you remove the syringe and reinstall the bleed port screw, this is normal. be sure to wipe the fluid off the lever with a clean rag.*



**18** Spray isopropyl alcohol or water onto a clean rag and wipe off the brake lever and caliper to remove any excess DOT fluid.

**19** Remove the Bleed Block from the caliper and reinstall the brake pads and spreader clip.

**20** Reinstall your wheel according to the manufacturer's instructions.

**CAUTION**

- Empty the syringes into a sealed container and dispose of the fluid properly. Remember, DOT fluid should be recycled or disposed of in accordance to local and federal regulations.
- NEVER pour DOT fluid down a sewage or drainage system or into the ground or a body of water.
- Do not re-use this fluid.
- Do not leave the hose clamps closed, this will damage the clear tubing on the syringes.

**21** You are almost ready to ride, but first it's a good idea to test your brakes. Pull on the lever extremely hard (as hard as you can imagine yourself pulling the lever while you're riding) several times. Make sure to look around the compression nut on the lever, and the banjo bolt on the caliper for any leaks. Make one last check of all the bolts and fittings.If everything checks out, YOU ARE READY TO RIDE!

## DISC BRAKE PAD AND ROTOR BED-IN PROCEDURE

All new brake pads and rotors should be put through a wear-in process called 'bed-in'. The bed-in procedure, which should be performed prior to your first ride, ensures the most consistent and powerful braking feel along with the quietest braking in most riding conditions. The bed-in process heats up the brake pads and rotors which deposits an even layer of brake pad material (transfer layer) to the braking surface of the rotor. The transfer layer optimizes braking performance.

### WARNING

**The bed-in process requires you to perform heavy braking. You must be familiar with the power and operation of disc brakes. Braking heavily when not familiar with the power and operation of disc brakes could cause you to lose control of your bicycle, which could lead to a crash and could lead to serious injury and/or death. If you are unfamiliar with the power and operation of disc brakes, you should have the bed-in process performed by a qualified bicycle mechanic.**

### IMPORTANT

To safely achieve optimal results, remain seated on the bike during the entire bed-in procedure.

1. Accelerate the bike to a moderate speed, then firmly apply the brakes until you are at walking speed. Repeat approximately twenty times.

2. Accelerate the bike to a faster speed. Then very firmly apply the brakes until you are at walking speed. Repeat approximately ten times.

### IMPORTANT

Do not lock up the wheels at any point during the bed-in procedure.

3. Allow the brakes to cool prior to any additional riding.

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